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THE

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DEVOTED TO MEDICINE AND SURGERY.

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Original Communications.

VACCINE THERAPY: ITS PRACTICAL APPLICATION.

BY CLINTON E. BRUSH, B.S., M.D., NASHVILLE, TENN.

What is vaccine therapy? It is the only rational treatment for certain classes of infections and, I might add, in some it is the only form of therapy that brings results. To be more specific, however, it is the treatment of an infection by the hypodermic injection of a suspension of skilled bacteria of the species causing the infection. Such a suspension of bacteria is known as a vaccine, and we speak of streptococcus vaccines, staphylococcus vaccines, etc., according to the organism in the vaccine. A certain manufacturing house is putting on the market stock vaccines which they call "Bacterins." The name is, perhaps, more applicable to the preparations than the term vaccine, but the latter is the one in almost universal use, has undoubtedly come to

stay, and is therefore the one that should be used. We recognize two kinds of vaccines—those made from the organism isolated from the individual himself and which is called an autogenous vaccine, and that made from laboratory cultures of the organism or a mixture of several strains of the same organism to which the name stock vaccine is given. The question of the relative value of stock and autogenous vaccines will form a part of the discussion of this paper.

Although attempts at immunization against and cure of disease by inoculation with bacteria or their products have been carried on for years, it remained for Sir A. E. Wright of England, to place the subject on a scientific basis, and to advance an explanation of how a vaccine acts and why it does good. Some years before Wright worked out the proof of how the body overcomes certain bacterial infections and how it is stimulated by the use of a vaccine, he was treating successfully with vaccines cases of acne, furunculosis, etc., which had resisted all other forms of treatment, but he was working in the dark. It was empirical therapy and he could not guage the proper size of dose and the proper interval of dosage. As a result, he did not have the uniformly brilliant results that now attend his treatment.

That the control of infection depends to a great extent upon the phenomenon of phagocytosis by the leucocytes has been granted almost universal credence since Metchnikoff first gave to the world his theory that all infections, when cured, are overcome by the leucocytes engulfing and destroying the invading microbes. He placed all the initiative, so to speak, in the leucocytes. He thought that all that was necessary for a leucocyte to ingest bacteria was for it to get near enough to them. He regarded the leucocytes as scavengers with a limitless appetite, that traveled around in the blood stream, ready to clean up any germs with which they came in contact. It remained for Wright to prove that the leucocyte by itself does not possess the power to ingest bacteria, that it will not ingest a germ unless that germ has been made palatable for it by the action of a certain substance in the blood. To this substance Wright gave the name "Opsonin," from the Latin verb "opsono," meaning, "I prepare food for."

Interesting as are the experiments by which Wright came to his conclusions regarding the nature of opsonins, it is not in the scope of this paper to describe them, but it will suffice to give merely the conclusion which he has reached:

1. There is present in the blood serum a substance which, by its action on bacteria, so alters them that the leucocytes may ingest them. This substance is the opsonin.

2. Without having been acted upon by the opsonins, the bacteria cannot be ingested by the leucocytes.

3. The opsonin exerts no influence upon the leucocytes.

4. Opsonins are thermolabile substances, i. e., they are destroyed by heating to 60 degrees Centigrade.

5. There is probably a specific opsonin for each organism.

These observations of Wright's are certainly of scientific interest. Are they of any practical value? The answer is unequivocally "yes." When one stops to consider that it is through the agency of the opsonins that the leucocytes are able to overcome many of the bacterial infections, the value of a thorough knowledge of opsonins is readily seen, providing we are able to measure the amount of opsonin present in a given case and then to increase it if there is not enough already present. As we are indebted to Wright for the discovery of opsonins, so also are we indebted to him for devising a means of estimating quantitatively the opsonic content of the blood and for giving us a means of increasing the amount of opsonin when deficient. As we are unable to isolate the opsonins by any chemical means, it is obviously impossible for us to measure the opsonins as such, but we can determine the effect that the serum of a normal individual and that of a person suffering from some infection has upon the bacteria producing the disease, and then by comparing the two find the relation that the opsonic content of the diseased person's blood bears to that of the normal blood. Very briefly, the method is as follows: In one pipette mix equal volumes of the patient's blood serum, a suspension of leucocytes and an emulsion of the bacteria causing the disease. In another pipette mix equal volumes of the same suspension of leucocytes, the same emulsion of bacteria and normal blood serum. Incubate the two

pipettes at body temperature for a certain length of time, and then smear a drop of the mixture from each pipette on a slide, stain them and count 100 leucocytes, noting the number of bacteria in them. Let us suppose the patient to be suffering with a chronic furunculosis due to the staphylococcus aureus. Also let us suppose that in counting 100 leucocytes on the slide from the patient's serum we find 300 cocci ingested by the leucocytes, while on the slide from the normal we find 600 cocci in 100 leucocytes. Then the average number of cocci ingested by each leucocyte after being acted upon by the patient's serum is 3, while the average number per leucocyte after being acted upon by the normal serum is 6. Therefore, as the suspension of leucocytes and the emulsion of bacteria were constant in both mixtures, the conclusion is that, under similar conditions, the serum of the patient in question can prepare only 3 staphylococci for ingestion by the leucocytes, while the normal can prepare 6. If we divide 3 by 6, we get .5. This quotient, obtained by dividing the average number of bacteria ingested by the leucocytes in the smear from the patient's serum by the average number ingested by the leucocytes in the smear from the normal, is spoken of as the Opsonic Index. In this case the opsonic index is .5, that is, the patient's blood contains only one-half as much opsonin as normal, or, to put it in simpler terms, that individual has only one-half as much resisting power toward the staphylococcus aureus as the normal individual possesses. Therefore, if we can do something to increase that patient's opsonic content or, in other words, to increase his resisting power against the staphylococcus, it stands to reason that his chances of overcoming the infection are greatly augmented.

This is accomplished by the use of the vaccine. Wright found that, when he injected an individual with a vaccine, he obtained a characteristic effect upon the opsonic index. At first there was a slight fall—the negative phase—which passed off in 24 to 48 hours, and was followed by a rise beyond the original and sometimes far beyond the normal. This is the positive phase and indicates increased resistance toward the organism as long as it lasts, which varies with the organism used, and also with the size

of the dose. After a period of days, the index again returns to approximately its original level. This change in the opsonic index following an inoculation with a vaccine may be spoken of as the curve or opsonic reaction. Wright also showed that by repeated inoculations with the proper size dose and at the proper intervals he could maintain an increased resistance against that organism. From this it is evident what course should be pursued in case of an infection which we wish to treat by a vaccine. Absolutely essential first is the determination of the infecting organism. This can be done only by the bacteriologist. After the organism is determined, the patient's opsonic index toward that organism should be taken. A vaccine is made from the organism and, if the index is found to be low, the patient receives an inoculation—the size of the dose depending upon the organism in question, the opsonic index and the general condition of the patient. The index is then taken every two days in order to see if the inoculation has had the desired effect. If it has, it is repeated when the index reaches or approaches normal. This is the outline of our method of undertaking the treatment of a case with a vaccine.

Naturally several questions arise in the minds of the practitioner. Can I apply the method in my practice? Must I have the organism identified? Is it necessary to have the index taken throughout the course of the treatment? Must I have my vaccine made from the organism isolated from the patient, i. e., an autogenous vaccine—or can I use a stock vaccine of that organism?

The first question may be answered in the affirmative. It is possible for any practitioner to carry out vaccine therapy as successfully as the specialist, providing he obtains the proper vaccine and knows the dose and interval of dosage best suited to his patient.

Must the organism be identified? Naturally one cannot make use of a vaccine until he knows with what organism his patient is infected. In a few infections, furunculosis, for example, we know that in almost every case the staphylococcus aureus is the infecting organism and we can make use of a stock vaccine if we so

desire, and the chances are that we shall have good success. However, even in furunculosis and abscesses, the infecting organism may be the staphylococcus albus or the streptococcus, or even a mixed infection of two organisms, and, in such a case, the necessity of a determination of the infecting organism would be all-important for the success of the treatment. It is not necessary, however, to wait for the actual identification of the organism before beginning vaccine inoculation, when autogenous vaccines are being used. Having isolated the organism, made the vaccine, taken the index and found it low, we can begin the inoculations and leave the actual identification of the organism to be worked out subsequently, as it means considerable delay if we wait for complete bacteriological proof of identity of the organism before beginning treatment. The time required to isolate the infecting organism and make and standardize the vaccine from it will vary from 48 hours to several days, depending upon the organism present and whether it is in pure culture or not.

Must the opsonic index be taken throughout the whole course of the treatment? Most certainly not. Fortunately, we find that in the same individual the curves of opsonic reaction obtained from the same size doses of vaccine are of practically the same duration, so that all that is necessary is to take the index throughout one reaction or two at the most in order to determine the optimum dose and correct interval of dosage for that individual, and then repeat that dose at the intervals determined. I am aware that this method is contrary to the teachings of Wright and many others, who believe in increasing the dose with each inoculation, but I believe that better results are obtained by simply trying to maintain a resistance slightly above normal instead of an abnormally high resistance, because, as with other tissues of the body, overstimulation of the opsonogenic structures probably leads in the end to a state of collapse, when they will fail to respond to the stimulus of the vaccine. Also, I am taking a position different from some when I hold that it is necessary to take the index at all; but I maintain that without taking the index for one curve at least time may be lost, as we have no other guide as to the dose or interval of dosage. That I am correct in this position is

shown, I think, by the fact that the advocates of vaccine therapy without the index run to cover, so to speak, by taking the index if the patient fails to show signs of improvement after the first few inoculations. In other words, they prefer to grope around in the dark until they fall into a hole and then turn on the light so as to be able to crawl out of it, instead of turning on the light first by taking the index and thereby avoid falling into the hole, with the resultant loss of time in the improvement of the patient. In cases of mixed infection, as in many cases of cystitis and sinuses, it is always essential to take the opsonic index toward the different organisms in order to determine which is the one responsible for the pathological condition.

Must we use autogenous vaccines? For all infections except those due to the tubercle bacillus, the gonococcus and the staphylococcus aureus, I believe that autogenous vaccines are essential. In tuberculosis, autogenous vaccines are practically out of the question, owing to the time required to grow the tubercle bacilli. In gonorrhœal affections, too, I think that a stock vaccine must be used in most cases, owing to the difficulty in growing the gonococcus, although it has been shown that autogenous vaccines here are to be preferred when it is possible to obtain them. In staphylococcus aureus infections, I believe that autogenous vaccines will result in much more rapid cures than the stock vaccines, and consequently are to be preferred, but the latter may be used with a considerable degree of success.

I shall not weary you with statistics as to cases treated which have been reported, for they are tiresome at best and, when all is said and done, the fact still remains that they are only statistics. I shall merely enumerate the infections which in the majority of cases yield to this form of treatment, and then give very briefly the results of some of my own observations—mostly in cases treated by myself, but a few of them in cases treated by Ross at the Toronto General Hospital. Good results may be expected in the application of vaccine therapy to all forms of staphyloccocus aureus and albus infections, cystitis due to bacillus coli and streptococcus, local infections due to bacillus coli and streptococcus, acute gonorrhœa, gonorrhœal urethritis, chronic ure-

thritis, chronic suppurations anywhere, all localized tubercular lesions together with selected cases of early pulmonary tuberculosis. Aside from this, it is an extremely useful adjunct to the surgeon in clearing up infectious conditions such as abscesses and carbuncles which have been opened, and also infected wounds, and thereby avoid the tedious and protracted dressings. The conditions I would report have been classified according to the organism present:

Staphylococcus aureus.

Furunculosis, 10 cases; average number of injections, 4; all cured. Bone fellon, 1 case; number of injections, 3; cured. Bed sore in typhoid, 1 case; number of injections, 3; cured. cured.

Streptococcus.

Impetigo contagiosa, 1 case; number of injections, 3; cured. Infected finger, 1 case; number of injections, 2; cured. Cystitis, 1 case; number of injections, 3; improving. Cystitis (Ross), 1 case; 3 months' treatment; cured. Hectic condition in Tb., 1 case; number of injections, 2; ceased at once. Lung abscess, 1 case; 6 weeks' treatment; greatly improved.

Colon bacillus.

Osteomyelitis, 1 case; number of injections, 5; cured. Ureteritis, 1 case; 1 month's treatment; improving. Cystitis (Ross), 1 case; number of injections, 2; much improved.

Gonococcus.

Acute gonorrhœa (Ross), 1 case; number of injections, 2; cured. Acute gonorrhœa, 1 case; number of injections, 3; cured.

Tubercle bacillus.

Arthritis, 1 case; 8 months' treatment; cured. Adenitis, 1 case; 6 months' treatment; cured. Adenitis, 2 cases, under treatment; improving. Cystitis (Ross), 2 cases; about 6 months' treatment; cured. Pulmonary Tb., 1 case; two injections showed marked improvement.

From what I have said, my position in regard to the use of vaccine therapy by the practitioner is, I believe, clear. I feel that

he should certainly be able to enjoy the good results accruing from it, but in order to apply it satisfactorily, he should:

1. Have each case examined bacteriologically.

2. Have the opsonic index taken for a length of time sufficient to determine the optimum dose and interval of dosage for his patient.

3. When possible, he should have an autogenous vaccine made.

TWISTING OF THE PEDICLE IN OVARIAN TUMORS—WITH SPECIAL REFERENCE TO DIAGNOSIS.

BY M. C. MC GANNON, M.D., NASHVILLE, TENN.

I shall say but little of the cause of this trouble, and less of its treatment, since an early diagnosis is the all-important feature, upon which the physician and the welfare of the patient centers.

The pedicle of an ovarian tumor is made up of the structures by which the ovary is attached to the broad ligament and the length of the pedicle is influenced largely by the shape of the tumor and the part of the ovary from which the tumor grows. The longer and thinner the pedicle the more likely is it to produce trouble, so long as it is left inside of the abdominal cavity. The character of the twist varies very much. The pedicle may be rotated partially, or completely once, or it may be twisted upon itself many times.

For clinical purposes, however, it is only necessary for us to consider two varieties, viz.:

1. *Partial rotation.*

2. *Complete rotation.*

By partial rotation we mean that condition of the pedicle in which the twist is not sufficient to cut off the blood supply to the tumor, entirely. The venous return is to a greater or lesser extent impeded while the arterial current, though diminished, is not completely stopped.

Complete rotation does not always and at once stop the venous and arterial currents, though it in nearly all cases prevents the

return of the blood from the tumor. If the rotation occurs many times, the twisting may be so tight as to not only stop both currents, but cause necrosis of the pedicle and the separation of the tumor from its original attachment.

Many causes are assigned for this complication of ovarian tumors. No doubt in most cases more than one factor exists to bring about the accident. Predisposing causes are:

1. *A round, smooth cyst.* Since all intra-abdominal movements would influence such a tumor more than they would one with uneven surfaces.

2. *A long, thin pedicle.* Such an attachment would obviously allow more latitude to the tumor than if the pedicle were short or broad, or both at the same time.

3. *Situation.*—A tumor growing from the left side will be more affected by the movements of the sigmoid and the rectum, than if it is situated on the right side.

4. *Constipation.* The fæcal accumulation in the sigmoid will intermittently displace the neoplasm, and hence tend to bring it under changed intra-abdominal forces.

5. *Active strong abdominal walls.*—The sudden and great increase of intra-abdominal pressure when the muscles are powerful, forces every organ inside the belly into apposition; hence, when a tumor exists and is favorably situated for rotation, the action of a strong muscle would be a greater factor in determining the result than would a weak one.

6. *A growing pregnant uterus.*

7. *An over-filled bladder.*

8. *Tight bands about the waist.*

9. *Falls or other accidents.*

The exciting cause in probably all cases is muscular action.

Intra-abdominal pressure, that is the pressure over and above the normal atmospheric pressure, which exists in every normal abdomen when the muscles surrounding it are active, forces every structure inside the belly into that position which its contour and consistency causes it to occupy with most ease. This being true, it follows that multilocular tumors change their contours by the absorption of the septa between the individual cysts, going to

make up the large tumor, thus tending to produce a single cyst, and the smooth convex surface thus formed will be gradually forced against the smooth, regular concave surface of the anterior abdominal wall. The smaller single round cysts, those most often affected by twisting of the pedicle are rotated by the same action of the abdominal walls in keeping up intra-abdominal pressure. The force exercised by the contracting muscles is applied to the part of the cyst wall which lies nearest the centre of the abdomen, hence this tumor is made to rotate inwards, and this continuous rotation may produce any amount of twists in the pedicle. The number is influenced by the length of the pedicle and the interference of the adjacent viscera.

The pathological results of torsion are nearly always confined to the tumor, but with a long pedicle other viscera may be involved, as was well shown in one of my cases to which I shall refer later in this paper.

If the torsion is only partial, the first change is congestion of the veins and enlargement of the tumor with œdema of its walls. Later the engorgement may be so great as to cause rupture of the small vessels, and extravasation of the blood. If the interference with the circulation be very pronounced rupture of large blood vessels may occur with hemorrhage into the cyst cavity, which will become greatly distended, and may even rupture and pour its contents into the abdominal cavity. With these changes a more or less violent reactive inflammation of the peritoneal covering of the syst is set up, and adhesions form between the tumor and the adjacent viscera and abdominal walls. At the same time ascitic fluid more or less bloody, is poured out into the peritoneal cavity. If the twisting be sudden and complete, the blood currents, both venous and arterial are stopped and gangrene of the cyst soon supervenes.

The pathological changes in the surrounding viscera are but few, and result either from pressure by the tumor, strangulation by the pedicle, or from adhesions. Pressure by the sudden great enlargement of the tumor, I have known to embarrass respiration, cause frequent micturition, interfere with digestion and bowel movement. Adhesive bands may cause obstruction of the

bowel, chronic or acute, and the long twisted pedicle may do the same thing, as I have had reason to know.

Symptoms vary much, depending upon the degree of torsion. Pain; enlargement of the tumor; rigidity of the abdominal muscles; tenderness on pressure; vomiting; shock, and death are the signs of this accident. These symptoms, however, as might naturally be expected, do not all occur in the same case or with the same severity, in different cases.

When the tumor pedicle has undergone only partial torsion at first, the only symptoms will be a feeling of pelvic distress, that may not amount to a pain, and a sensation of fullness due to the enlargement of the neoplasm. After a short time, perhaps a few hours or a day or two at most, these symptoms become more pronounced, and added to them is tenderness upon pressure, and perchance some slight elevation of temperature depending upon the amount of peritonitis that has supervened. Movement increases the distress, so the patient remains in bed. After a time, when the adhesions between the tumor and the surrounding tissues and the tumor have become sufficiently organized, so that the blood currents are carried on through them and independent of the pedicle, the symptoms may subside and the patient's future suffering and all future symptoms will be due to the presence of the tumor, and the complications that may arise from the existence of the adhesions which have formed.

When the twisting of the pedicle is sufficient to more or less completely shut off the blood supply from the tumor, the symptoms are very pronounced. The pain may be intense. The tumor enlarges rapidly, and shock, as the result of hemorrhage into the cyst, may be profound, and should the cyst rupture, collapse and death may speedily ensue. If the patient survives the shock, gangrene of the neoplasm with peritonitis will follow. Adhesions may so surround the tumor, as to protect the general peritoneal cavity, and if suppuration occurs, as it usually does, then the abscess will be walled off, and nature may further protect the individual by causing the abscess contents to be evacuated through the bladder, the intestines, or rarely through the abdominal wall.

The diagnosis of torsion of the pedicle is difficult, and at times almost impossible. This may seem an unwarranted statement when it is admitted, that the symptoms are in most cases well marked. Perhaps mistakes in diagnosis would be less common, if the examiner were previous to the examination cognizant of the existence of an ovarian cyst and had a fair conception of its size; but as rotation of the tumor and torsion of its pedicle occur most frequently with small spherical cysts, the existence of the growth is in many cases unknown both to the patient and the examiner. When the sufferer is a young girl and the tumor cannot be felt through the abdominal wall, it is not unusual for this solution of the cause of the symptoms to be overlooked and some other pathological condition assigned.

Extra-uterine pregnancy; appendicitis; intestinal volvulus, and simple colic are the diseases with which this trouble is most likely to be confounded.

Extra-uterine pregnancy. In this there is a history of a delayed menstruation and there may be other signs of pregnancy. The pain is sharp and not severe, the collapse depends largely upon the amount of blood lost. There is usually some bloody flow from the vagina. At first there is no temperature, but after a day or two a slight elevation may ensue, and if the patient survives, infection of the clot and an abscess may follow. Here is a train of symptoms much the same as is found in ovarian tumor with torsion of the pedicle.

This is well illustrated by a patient referred to me by a gentleman, for whose diagnostic skill I have a very high regard. The patient was a young married woman, who gave no distinct history of having missed a period, though she stated her last menstruation, which had occurred four weeks before, was less than usual. While undergoing exertion that could not be classed as violent she felt a sudden pain in her right side, as though something had given away. The pain was very severe, and was followed by a sensation of great weakness, though she did not faint. She was immediately put to bed, and the doctor called. He found her somewhat shocked, but in no sense collapsed. Upon examination, a mass the size of a small grape fruit was detected on the

right side of the uterus. This mass was not particularly sensitive. There was some bloody flow from the vagina. Extra-uterine pregnancy was suspected, and the patient kept under observation. The pain persisted, the tumor enlarged slightly and tenderness began to manifest itself. The temperature arose varying from 99 to 100. In consultation we decided that the case was one of ovarian cyst with torsion of the pedicle, for the following reasons:

The absence of a history of a missed period. The severity of the initial pain; the size and globular shape of the mass at the side of the uterus; the increase of the tumor; the tenderness in the mass; the absence of a bulging in the posterior vaginal fornix; and the fact that the uterus was not enlarged. We thought the vaginal bloody flow was due to a simple menstrual epoch. Any one of these reasons could have been easily explained on the theory of extra-uterine pregnancy, but when taken in conjunction, they create a mass of evidence quite sufficient to enable one to draw the diagnostic line. Operation demonstrated that there was a cystic tumor of the right ovary, that the pedicle was twisted three times, and that there was a large quantity of sanious fluid free within the peritoneal cavity. The patient recovered.

That rotation of an ovarian cyst with torsion of the pedicle may simulate appendicitis is fairly well demonstrated by the following case:

A young woman, 16 years of age, a clerk in a grocery store, who always enjoyed good health, after eating a very hearty dinner, was suddenly taken with a pain in the abdomen, the pain being referred to the lower zone. There was no vomiting. Upon the arrival of her physician he found her lying upon the bed with her legs drawn up and complaining of great pain. He administered a hypodermic injection of morphia, which gave relief. The next morning she was still suffering and referred the pain to the right lower abdomen. The wall in this situation was tense and pressure elicited tenderness. The suffering was relieved by an opiate and the bowels were acted upon with castor oil. The following day the patient's condition was the same, but there was added to the train of symptoms a pulse of 120 and a tem-

perature of 99 1-2, and a tumor or mass easily felt. A diagnosis of appendicitis seemed warranted by the symptoms. Abdominal pain followed by localization in the right lower quadrant, with tension of the abdominal muscles over this region, tenderness upon pressure, rapid pulse and a tumor. The severity of the initial pain, which was not described, was colicky. The sudden development of a tumor, which was on the fourth day, when I saw the patient, as large as a child's head—in conjunction with the slight elevation of temperature, caused me to look for some other cause of the trouble than appendicitis. A vagino-abdominal examination revealed the existence of a spherical cystic mass to the right of the uterus, which I diagnosed as an ovarian tumor. The existence of this tumor with the history, as given, made the diagnosis of torsion of the pedicle a fairly easy task. Abdominal section revealed a simple ovarian cyst, with twisted pedicle and necrotic tract, which was adherent to the surrounding tissue.

Intestinal volvulus *v.* Torsion of an ovarian tumor pedicle is not a problem that I have ever seen presented in the literature of this subject. In the interesting and unusual case, which forms the third, which I have to report in this paper, I was called upon to exclude this disease in attempting to arrive at an opinion of the cause of the trouble.

From a school-girl, 16 years of age, the following history was obtained: Menstruation first occurred at 13; was always irregular and painful. A period was on when the present illness began. Personal history revealed that since 6 years of age she had been the subject of attacks of colic. Her general health has been otherwise good. The present illness began on September 1, 1905, on arising in the morning with cramps in the abdomen and intense pain in the left inguinal region. She had no vomiting or elevation of temperature at the time. The pulse, however, was rapid. She was given salts by the homefolks, but they were rejected by the stomach. Morphia, 3-4 gr., gave relief. There was no tenderness or muscular rigidity. On the following day the colicky pain continued; the abdomen became somewhat distended—tenderness was marked on the left side; the abdominal walls were tense and the temperature reached 100. This condition continued

throughout the third day. I saw her on the fourth day. She was lying on the right side with the left leg flexed; the right one straight. Her face was somewhat flushed, but the expression was good, though slightly anxious. All movements caused abdominal pain, colicky in character. These cramps were also produced by pressure over the abdomen. The abdominal walls were not very rigid, though they were greatly distended. Movable dullness was marked in both flanks, while an exaggerated, tympanitic note was present all over the rest of the belly. There were no signs of hernia at any of the usual situations, where that trouble is found. There was no history of a tumor, and no vaginal examination had been made. Clearly the symptoms here presented meant that there was an obstruction of the intestinal tract very low down, that a peritonitis had supervened, and that there was free fluid in the abdominal cavity. A volvulus of the sigmoid seemed from the evidence before us the most probable diagnosis, and it was agreed that with the indications for an abdominal section so clear that to cause the patient further distress by examination in order to be more positive in the diagnosis would not be justifiable.

An abdominal section was had within an hour after the consultation. On opening the abdomen the distended intestines rolled out of the cavity in large coils. Nowhere were they collapsed or black, but everywhere they were deeply congested, and in many places they appeared rough and granular. The belly contained a large amount of bloody fluid. Upon introducing my hand down to the sigmoid flexure of the colon, I came upon a small spherical cyst, the size of a large orange. It had a long pedicle, which was twisted twice upon itself, and besides was wrapped around a loop of the sigmoid, and had in its grasp the left Fallopian tube. The lumen of the bowel was completely occluded, and the outer part of the Fallopian tube was quite œdematous. No difficulty was encountered in relieving the strangulation of the bowel or in removing the tumor. The intestines, however, could not be returned inside the abdominal cavity, so great was their distention. A tube passed into the rectum permitted the gas to escape. Some kneading of the distended viscera

was necessary to empty them, since the intestines were sufficiently paralyzed, so that peristaltic movements were not strong enough to force the gas along. After the viscera were returned no other difficulty was encountered. The patient recovered.

CHRONIC CERVICITIS.

BY T. M. MONROE, M D., CENTER, MO.

This is a condition which very frequently confronts the general practitioner and gynecologist. Leucorrhea, a symptom which many ignorant persons wrongly consider a disease, is due in a large percentage of cases to a large increase in the amount of cervical discharge. Two kinds of infections attack the glands of Naboth—gonorrheal and simple micro-organisms found in the vagina. The first variety occasions a purulent discharge, which may appear only at times when the infected gland discharges its contents. The second variety begins as a rule when small retention cysts form in the cervix. Retention and decomposition of gland material sets up a low grade inflammation, which may persist for years, and prove very difficult to cure. Chronic cystic cervitis is characterized by thick, translucent, glairy discharge.

In general the treatment of this disease is surgical and local, although in certain cases where the patient's condition is one of lowered vitality, hygienic conditions should be afforded the infected structures, and this can best be accomplished by puncturing each distended gland, which feels like a shot or pea to the palpating finger, allowing the escape of purulent or glairy material.

Tincture of iodine should be painted over the surface after scarification and douches twice daily, together with applications of mild astringent antiseptics, should effect a speedy cure. In such conditions, Katharmon is very valuable since it is non-irritating and prevents septic decomposition. Among other ingredients it contains hydrastis, phytolacca, borosalicylic acid and sodium pyroborate dissolved in pure distilled extract of witch hazel. Hydrastis is a valuable alterative, astringent and antisep-

tic, when applied to diseased mucous membranes, and phytolacca exerts an abortive influence on beginning inflammations.

Borosalicylic acid and sodium pyroborate are efficient antiseptics, disinfectants and deodorants, and witch hazel possesses the tonic and astringent properties possessed by tannin. Thus the value of Katharmon is readily understood when the physiologic effects of its constituents are borne in mind.

Abstracts.

A CONTRIBUTION TO THE TREATMENT OF GONORRHEA WITH ARHOVIN.*

BY DR. M. WEINBERG, VIENNA, AUSTRIA.

Since he and Brings, some three years ago, jointly published their experiences with arhovin, Weinberg has made continued use of the remedy, and the favorable verdict which he now again renders therefore carries with it especial weight.

His observations signally demonstrate the fact that it is certain in effectiveness, and moreover has the merit of never causing irritative reaction on the part of any organ—a claim which cannot be made for any of the balsams. For even the new and improved balsamics are not altogether free from disagreeable actions on the stomach, intestines and kidneys. On the other hand, not one such instance is reported in the entire literature of arhovin, despite the large number of recorded cases. This fact is of such importance that, even if it were only equal in efficacy to the other medicaments, arhovin is far preferable.

Weinberg also finds arhovin possessed of most remarkable analgesic properties—a fact which he ascribes to the promptness with which it is absorbed. He always noted that even severe pain ceased within two days after its administration, and often

*Abstracted from the Wiener Medicinische Presse, No. 44, 1907.

on the same day. The astonishing regularity of this effect can only be explained on the ground that arhovin, which is rapidly eliminated, anæsthetizes the genito-urinary organs and arrests the inflammatory processes.

Weinberg places the dose somewhat above the average, giving in severe cases ten of the capsules of 4 grains daily. He attributes his excellent results partly to this increased dosage, from which he never saw untoward effects.

INTERNAL MEDICATION IN GONORRHEA.*

BY DR. JOSEPH PIKET, ASSISTANT AT THE ALLGEMEINE POLIKLINIK, VIENNA.

The treatment of gonorrhea taxes all the therapeutic resources at our command, among which internal remedies by no means rank as the least important. Of the latter, the balsams until lately held the dominant position. But in the large doses in which they have to be given, they disturb the gastrointestinal tract and, by the excretion of resinous acids, irritate the kidneys, while normal renal function is indispensable in the internal treatment of gonorrhea. Occasionally, too, a balsamic erythema or urticaria is observed. As, moreover, the balsams are powerless to prevent the development of gonorrhea, it was most desirable to find a more effective adjuvant to or, under proper circumstances, substitute for the injection treatment.

These efforts have found successful culmination in arhovin, an addition-product of diphenylamine and esterified thymyl-benzoic-acid. By reason of its strongly antiseptic components, arhovin possesses a marked disinfectant action, which, after its exhibition is still greater, as the remedy, i. e., its decomposition products—renders the urine acid, clears and imparts bacterio-inhibitory properties to that excretion, and thus combats the pus cocci. Arhovin is not toxic, has no harmful effect on stomach or intestines, and does not irritate the kidneys. According to Burch-

*From Berichte d. Versamulng Deut. Naturforscher u. Aerzte, Sept., 1907.

ard-Schlockow's work, it is absorbed in 20 to 25 minutes, and is excreted in altered form. The acidity of arhovin urine is so marked that usually it remains acid for 14 to 18 days. Piket's experience with it extends over two years and includes a large number of severe cases, both of acute and chronic gonorrhea, gonorrheal cystitis and complications in the female. He summarizes his opinion as follows:

"Arhovin is readily taken and well borne, has no deleterious effect of any kind, limits secretion, hinders gonococcal growth, and possesses a marked sedative action. It is a valuable addition to the armamentarium—a remedy that no physician will want to dispense with, for a test leads to its permanent adoption."

Selected Articles.

THE FAILURE OF LAW AND LAWYERS TO COPE WITH MODERN MEDICO-LEGAL EXIGENCIES, AND ITS REMEDY.*

BY JOHN PUNTON, M.D., KANSAS CITY, MO.
(Member American Neurological Association, etc.)

For a physician to undertake to demonstrate the failure of law, or presume to criticize lawyers and their special work, would seem impertinent, if not ridiculous. This, however, is exactly the unpleasant task my theme suggests.

Nor is this action unwarranted, for so universally common and prevalent has the reverse of this become, that we are often reminded of the truth of the proverb, which admonishes us that "People who live in glass houses, should not throw stones." Hence we find quite often, the science of medicine, not only sub-

*Read before the Medical Association of the Southwest at Hot Springs, Ark., October 9, 1907. Reprint from *St. Louis Medical Review*, December, 1907.

ject to undeserved censure, but medical men generally are severely criticized by lawyers, while the prevailing methods of medical practice are regarded by them with contempt, and even disgust, and medical testimony in courts of law, is today treated by the legal profession as a laughable farce or standing joke.

To turn the tables, and place the blame where it properly belongs, would, therefore, seem not only pardonable, but absolutely just and warrantable, as it comes strictly within the legal province of self-defense. Moreover, in this discussion of law and lawyers, we think we can demonstrate that both the science as well as the practice of law, are woefully deficient, and even incompetent to cope with modern medico-legal exigencies, because of its ultraconservatism and lack of up-to-date amendments and acquirements, while many of its representatives are given to even more subtle and various polite methods of trickery than can be found identified with the practice of medicine.

Indeed, as medical men, and members of a great and noble profession, we recognize and deplore the shameful ignominy imposed upon us through the wily and disgracefully unscrupulous methods of the quack and charlatan; yet we make bold the assertion that no such amount of unethical conduct or more damnable rascality exists today in the medical profession (bad as it really is) than that which is found to be associated with the modern practice of law. Nor will it be necessary in proving these assertions to resort to personal abuse or any spirit of revenge. On the contrary, occasion will be taken freely to quote the opinions of well-known, competent lawyers, concerning the weakness of law and the serious evils which now beset the practical administration of justice.

CRIME, A BUSINESS.

To think that an alliance is formed between criminals and certain lawyers, thus making convictions almost impossible, seems absurd, if not beyond the comprehension of any sane person. Such, however, is said to be the case by a leading judge of New York in a recent interview. "It is perfectly apparent," says Judge Cornell, "to anyone sitting in a magistrate's court, where we get to know more about crime than in any other walk of life, that

there are regularly organized bands of professional criminals in this city who are daily growing bolder."

"It is no exaggeration to say that crime in New York is now on a business basis. This is shown in the ease and rapidity with which pickpockets, wire tappers, confidence men, and thugs find bail and lawyers to defend them. The growing alliance between criminals and certain lawyers has become so open that I have come to know what counsel different sorts of offenders will have appear for them. There are specialists, so to speak, in all branches of rascality."

LEGAL FAILURES ILLUSTRATED.

It would, however, in the time allotted me, be impossible to enlarge upon the numerous features wherein law and lawyers fail satisfactorily to adjudicate modern medico-legal exigencies.

Only a few of the more glaring examples can, therefore, be used, and these by way of illustrating the great need of legal reform. One of the more serious and pathetic medico-legal problems which confronts the modern medical practitioner pertains to the proper care and treatment of so-called nervousness or borderland insanity. Every physician with any amount of practical experience who is familiar with the progress made in neurology and psychiatry, can fully appreciate how difficult it is at the present time to provide proper legal and medical control for such nervous invalids, without violating the statutory law.

The medical treatment, however, for all such persons at least indicates, if not absolutely requires, *rigid isolation* with more or less *discipline* and even *mild restraint* as the one thing *needful,* more especially in their *incipiency,* and when this is *early enforced,* the probability of a *speedy cure* is greatly enhanced. Without it, however, the future of the patient is most unpromising, and procrastination becomes synonymous with incurability. The family physician, as well as the alienist and neurologist, recognizing the necessity and importance for such neurotic persons, of the substitution of new environments and the removal of all sources of irritation and indulgence, whether this consists in leaving home and sympathizing friends and being placed under appropriate

medical surveillance, or not, is unable to enforce this most important scientific medical principle, for the law, as it now stands, as well as the lawyer, forbids such a procedure. Hence they are ready to prosecute the physician, who attempts to provide his patient with this most urgent method of treatment, even though it be in harmony with modern medical scientific teaching and experience for best results. Before such can be done, the law as well as the lawyer informs you that your patient, suffering from neurasthenia, psychasthenia, hysteria, simple melancholia, precocious dementia, drug habits, and all forms of inebriety must first be *adjudged insane* before they can receive such rational treatment, which, of course, the patient refuses to allow. Hence the neuro-psychopath, or those suffering from so-called nervousness—which is often another name for borderland insanity—is permitted to merge from a state of curability into that of incurability, and later become a ward of either the State Insane Hospital, penitentiary, or poor-house for the rest of his days, because the law is inadequate to meet such a medical necessity. A law to adjust this medico-legal exigency is, therefore, urgently needed in order to overcome and prevent the ever-increasing tide of actual insanity, and allied criminology.

THE LEGAL ASPECT OF MEDICAL EXPERT EVIDENCE.

Again, the many evils which attend the present system of medical expert evidence offer another conspicuous illustration of the weakness of law and lawyers to cope with modern medico-legal exigencies. Indeed so serious have its attending evils become, that recently Judge Emery, Chief Justice of the Supreme Court of Maine, introduced into the Maine Legislature a bill suggesting a remedy. In his able address, however, he took occasion to refer to the many cases which rendered expert evidence so very undesirable, and reviewed in detail, the many failings of the medical witness. By virtue of his position and ripe experience as a lawyer, Judge Emery is, therefore, fully competent to present the prevailing views of the legal profession concerning the doctor and the legal aspect of medical evidence, which is as follows: After referring to medical testimony as a necessary evil, he then

spoke of the inexactness of medicine as a science and claimed that many dogmas, believed and given out today as medical truths may be abandoned tomorrow, and the only safeguard against this infirmity is for the medical witness frankly to avow its existence and for the tribunals to recognize it and base their judgments as little as possible on what are simply the theories and doctrines of the day. He then enlarged upon several other causes such as "The natural zeal of the medical witness to magnify his profession and parade his learning" with the result of stating his own personal theories and giving these as medical truisms instead of confining himself to those facts attested and approved by the vast body of the medical profession. "The fear of admitting their ignorance in public" also leads many physicians to incur the risk of misstatement, hence they rely too much on general knowledge and experience without making any special investigation of the matter in controversy. Consequently they commit blunders which are inexcusable, and leave them open to criticism. The mental constitution or temperament of the medical witness, he also claims as a factor which greatly affects medical testimony. Hence some physicians easily become confused on the witness stand and get mixed up in their statements, thus contradicting themselves. The much debated hypothetical question is also a prolific source of evil in criminal procedure, as it rarely states the facts and the answers are thus misleading and most unsatisfactory. The growing practice of having the medical witness attend the trial, and hearing the evidence and then placing him on the witness stand and asking for his professional opinion, all of which leads to gross errors in judgment. These and many other causes were cited, but the most prolific cause of the disrepute in which medical evidence is held is, according to Judge Emery, the *partisanship* excited in and displayed by medical witnesses. This tendency, he claims is aggravated by two practices, viz.: The extra and often large compensation paid, or the retainer fee, which means the greater the fee, the greater the desire to be called as a witness; and that of the physician acting as a witness and also as tutor or adviser to the party or attorney

calling him. Testimony so given, he claims, is very unsatisfactory and devoid of value.

The bill proposed by Judge Emery, sought to remedy all these evils, by authorizing the court to appoint a medical commission to examine into the merits of the case, irrespective of the lawyers on either side, but unfortunately, the bill failed to pass.

THE MEDICAL ASPECT OF EXPERT TESTIMONY.

Those of you who have had large experience in courts as medical witnesses recognize the force of the many weaknesses which Judge Emery recognizes in the doctor. But there is another side to this question, which the learned judge fails to mention, and this pertains to the grievous errors concerning the law itself and the many evils associated with its practice.

That the medical witness is open at times to severe censure and criticism, we are willing to admit, but we also believe the lawyer deserves more blame than the doctor for the many miscarriages of justice.

From the standpoint of the lawyer, all doctors are alike, irrespective of their qualifications and character. While their professional wares such as their scientific knowledge and skill, as well as their manhood, are considered by lawyers as marketable goods, and open to all those who choose to purchase them at a given price. More especially is this true they claim, when it comes to testifying in courts of law, for they reason we are all members of the same profession, hence tarred with the same brush, and consequently, necessarily bear the legal brand of being either a liar or a vagabond. This is expressed when they say that every physician has his price, while his testimony can be bought in secret. Moreover, they accuse us of partisanship, and of resorting to unethical means of favoritism on the witness stand, at the expense of the almighty dollar. But what about the lawyers and their failings? Hear what a member of their own craft has to say, one who is not only able but competent to speak, by virtue of his position as Professor of International Law in the University of Missouri. "There are plenty of lawyers in the State," says Vasco H. Roberts, "skilled enough to make the worse

appear the better part. What is needed is more lawyers honorable and high-minded enough not to prostitute their talents and energies to base uses.

"There are hundreds of lawyers in Missouri who induce people to go to law when there is no good ground for them to do so. Some employ 'snitches' to drum up business. No lawyer guilty of such reprehensible conduct ought to be allowed to practise a day after he is found out. Many a lawyer will take a case when he knows his client is clearly in the wrong. Courts are established to enable people to get their rights, not to enable them to escape punishment or judiciously to wrong others. The lawyer who knowingly strives to get for his client a lighter punishment or a heavier judgment than he believes he deserves may, in the opinion of his fellow lawyers, be guilty of no offense; but he cannot successfully defend his conduct at the bar of good morals.

"Lawyers and judges know better than anybody else the misconduct, and even crimes, of which many of their profession are guilty. The movement for reform in the practice of law in Missouri ought, therefore, to be started by the courts and the honest and honorable members of the bar. Honest lawyers ought to have enough pride in their profession to try to weed rascals and rascality out of it, and keep them out."

TRIAL OF INSANE CRIMINALS.

Another illustration of the failure of law and lawyers to cope with modern exigencies is evident in the trial of insane criminals. The fundamental error in such procedure is the application of the legal test of responsibility, viz.: the knowledge of right and wrong as to the act at the time of the commission of the crime. The fallacy and injustice of such a rule when applied to the insane, has been so often demonstrated and condemned by medical writers as to need no further enlargement on my part, suffice it to say, that its application often proves most unjust and inhuman. At a recent meeting of the New York Psychiatrical Society, Dr. Pearce Bailey read a very instructive and valuable paper concerning the improvement of medico-legal methods (*Jour-*

nal of Insanity, July, 1907). Speaking of the right and wrong test, he said, "A loophole has been left in certain States by adding the uncontrollable impulse clause. When this clause did not exist the fate of the prisoner depended upon the construction which the jury saw fit to place on the knowledge of right and wrong as mentioned in the law. The question would naturally arise, why, if so unsatisfactory, this test had stood so long with so little variation. The reasons were evident. Defective as is the knowledge of right and wrong as a test of responsibility, no better substitute had ever been offered." "Another reason why this law had stood, might be found in the fact that the matter is always in the hands of laymen, to whom the science of psychiatry is practically unknown. Modern psychiatry demanded that this test be not replaced by another, but be done away with altogether."

"No criminal procedure could be at harmony with modern views of mental disease as long as there was no middle course between responsibility and irresponsibility and no means of judging between them, except those furnished by the knowledge of right and wrong. Nothing had been more plainly taught by recent advances in psychiatry, than that different mental states make different degrees of responsibility." No law which failed to take cognizance of this fact, could be satisfactory to alienists or medical men generally. A law should, therefore, be passed which would overcome, not only this, but many other evils of modern procedure.

EVILS OF TECHNICALITIES.

The quest on the part of the lawyer to detect error and release his client from punishment on the ground of some actual or fake technicality, even when there exists no doubt of guilt, was the subject of a recent address before the Kansas City Bar Association by Judge Charles F. Amidon, the presiding judge of the Federal Court, who created quite a sensation among the lawyers present in what he had to say concerning "The quest of error in the administration of justice." Among other things, he said, "It is the hope of every criminal, this hope of the commission of error. If a man has money enough to hire sufficiently able at-

torneys to prepare a cause with sufficient elaboration, he need have little fear of criminal punishment. And by that, I do not charge corruption, I simply confess that a trial judge is human, and with technical rules of law and evidence, in the majority of cases, it is impossible that error shall not be found in the record. What is the result of the system in this country? It makes the trial a fight, not for justice, but to get error into the record. In English courts the whole effort is to work out justice, not in the abstract, but between plaintiff and defendant. This quest for error makes the trial of cases a mere quibble. No more effective scourge can be placed in the hands of the strong with which to oppress and afflict the weak, than the easy reversal of causes for matters that do not affect the merits."

Commenting on the address, the next day in an editorial, the *Kansas City Star* said, "It was opportune that a jurist of the first class should call attention to the real underlying evil of the social system in America, and should do it in a speech to an association of lawyers eminent for their proficiency in the technical devices of the courts. But it is the lawyers who make the courts. It is the lawyers who devise loopholes in laws. It is the lawyers who take a fee from a known boodler or other criminal and squeeze him through one of these flaws of their own devising to go unwhipped and none the worse for the mishap of being caught. The technicalities of courts, for which lawyers are responsible, constitute the underlying evil of the American life. This cannot be too often repeated. Nor is its truth confined to trials of statutory crimes. The technical evasions by which trusts rob the people and threaten the social fabric, as well as the vermicular processes by which boodlers prey unmolested upon society are the work of the lawyers and could be changed in one day by the lawyers if they would demand the change."

There are several other subjects that could profitably be discussed, such as, gross evils of the jury system, unethical methods of obtaining and introducing medical evidence; the bulldozing methods of the lawyer in examining a medical witness; unpardonable ignorance of medical science among lawyers, and consequent failure to detect and take advantage of a manufactured an-

swer by a medical man when he attempts to prevaricate or evade the truth, many such answers being medical contradictions; refusing the introduction of medical truth by the lawyer when it reflects upon his client; faulty methods concerning the examination of one accused of capital crime; harsh and undue criticism of medical fees by the lawyer in court, and even their exemption favored for medical services rendered.

The recommendation, for instance, by Judge Emery that the physician should obey the court subpœna to appear and testify like any other witness for the common statutory fee, is, in my judgment, open to serious objection. Would the better and most experienced lawyers be willing to devote their time and services for a like consideration, or even the learned judge himself, enjoy such intrusion upon his time and talents?

"I see no good reason," says the learned judge, "for exempting physicians from the common duty to appear and testify in court for small fees."

These and many similar medico-legal questions could be enlarged upon, if time permitted, but suffice it to say that as physicians, all we ask is fair play and equally proportionate rights with the lawyer in dealing with such medico-legal problems.

ANCIENT VS. MODERN MEDICAL SCIENCE.

A pet belief and fallacious error is held by lawyers and disseminated by them through the medium of newspaper reporters to the effect that the science of medicine is too old and antiquated to be of any further use, and that its tenets are so inexact and unreliable that even the more ethical and competent practitioners of medicine are accused of being highly impractical men, and at best, old fogies, while their opinions concerning disease and its prevention and even cure are not considered worthy of any respect, much less confidence. Hence we find the lawyer taking great delight in twitting the doctor on the street, as well as on the witness stand, concerning the ancient origin of the science of medicine and its relation to all forms of superstition and mysticism, and declaring in a contemptuous, jestful manner to the public, as well as the jury, that because of its hoary age and non-progres-

siveness, as well as lack of scientific exactness, that the opinions formed from its deductions by the physicians are not only most unreliable, but very misleading and utterly void of any practical value.

While as medical men we acknowledge the ancient origin of medicine and recognize its various weaknesses, yet we protest against the charge of being members of an old, antiquated, good-for-nothing, impractical, non-progressive, inexact, unreliable, pseudo-scientific medical profession. Indeed we have listened to this sort of unjust censure and foolish criticism from lawyers until patience ceases to be a virtue, and the truth needs to be told by an abler pen.

INADEQUACY OF LAW AS A SCIENCE.

It is, therefore, very refreshing to find a lawyer of lawyers, one who is well known and recognized as an eminent legal authority in America, telling us in a recent public address, "that while every other branch of human industry and department of intellectual endeavor has gone forward, there has been no progress made in law for over 5,000 years, and that the same law which obtains today was in force in the city of Athens 420 years B. C." Such is the declaration of Eugene Ware, the noted lawyer and scholarly poet of Topeka, Kansas. To use his own language, he said, "That so far from being an exact science, or a progressive study there has been no improvement in the law or the practice in the last 5,000 years. "I maintain," said Mr. Ware, in his address to the Oklahoma and Indian Territory Bar Association, "that there is not a law in our code of legal procedure today that was not in vogue in the city of Nineveh 5,000 years ago, and which was not used in Athens 420 years before Christ." A severer indictment of the law as a learned profession, and of lawyers as devoted mainstays of society, could hardly be imagined than that. No progression in 5,000 years, no new methods to speed or assure justice, and thereby promote the welfare of society. Every other branch of human industry and department of intellectual endeavor has gone forward, while the law has stood stock still.

Surely the lawyers have no room to boast of their superiority in up-to-dateness or modern advances, unless it be in modes of trickery to evade lawful justice. Hence, they must not complain when we as physicians claim that the law as administered and practised today is wholly incompetent to cope with modern medico-legal exigencies, indeed we believe that certain laws should be amended and others enacted in order to meet the medico-legal requirements of the age in which we live. The progressive advance in medical science has rendered finer discriminations in classification and diagnosis of diseased conditions possible, and consequent improvement in means and measures for their alleviation, prevention, and cure. This, therefore, necessitates similar progress and development in medical jurisprudence, as well as demands the hearty co-operation and support of our legal advisers, and when these fail to be forthcoming, as they are today, we, as medical men, are unable to furnish the sick and afflicted the help and assistance which modern medical science clearly indicates in the scientific care and treatment of morbid conditions involving medico-legal problems. Hence as physicians, we contend that the law itself, as well as the lawyers in their interpretation of it, are largely responsible for many of the shortcomings, which they now charge to the doctor.

If, therefore, the law itself was amended to meet modern medical exigencies, and the lawyers reformed in their methods of unethical practice, the chief cause of many of the evils associated with the solving of many of the more intricate medico-legal problems would thereby be removed, while the doctor and the lawyer would be better prepared to subserve the ends of justice. Indeed, so prevalent and flagrant have the violations of justice become, more especially in cases where medico-legal questions are involved, that the more ethical members of both the professions of law and medicine are not only ashamed of such travesties, but are now engaged in devising means and measures for their speedy relief.

Apropos of this is a recent article by Samuel E. Moffatt in *Collier's Weekly,* on "Lawyers as Public Enemies." He says, "Reformers have been fighting corruption in America for forty

years and they are just beginning to learn where their real enemies are. They started with the idea that the trouble was with the politicians. A few years ago they began to realize that the politicians were only the small end of the evil, and that for every corrupt alderman or boss who sold, there was an equally corrupt and more dangerous business man who bought.". . . . "They have still to learn that the corrupt business man would be comparatively harmless if he could not hire a legal expert to teach him how to buy safely. No stolen franchise could be held, no criminal trust could stand, if legal talent had not cunningly fashioned a charter and studied out the loopholes in the law. . . . . ."

"Under the code of ethics by which a lawyer is held justified in hiring out his brains and his conscience to the highest bidder, the public must always suffer, because predatory private interests can always outbid it. A corporation that is trying to steal ten millions of public property can afford to pay one million to the lawyers that plan and execute the job, but what machinery could be devised by which a community could offer a similar bribe for its defense? The greatest moral need of our time is a revision of the standard of legal ethics." . . . . "Reform work will be an uphill undertaking until the profession that absorbs the best minds of American youth is purified by the formation of a class sentiment in the law schools which shall hold it as disgraceful to sell out the public as it is now held to sell out a client."

Finally, a Legal and Medical Conference is needed.

The present inadequacy of law to meet the demands of modern medical progress is therefore sufficient to urge the necessity of the votaries of these two noble professions to confer with each other in an official capacity with full power to adjust and amend existing laws to meet the various delinquent medical exigencies of the age.

A conference between the members of the American Bar Association and the American Medical Association is, therefore urged, as the remedy for the present medico-legal failures.

A resolution favoring such a movement emanating from this

great and influential medical organization would not only be conducive towards promoting a higher standard of ethics, but demonstrate our practical interest in a medico-legal reform, which is sadly needed, besides contributing towards harmonizing the mutual relationship which should exist between Law and Medicine.

THE NATURE AND TREATMENT OF DROPSY.

BY DR. THOMAS HUNT STUCKY, A.M., M.D., LOUISVILLE, KY.

The term dropsy is one which is rather loosely applied to any abnormal accumulation of watery fluid in the body. In more concise technical language we use the word edema when the fluid occurs within the interstices of tissue and ascites when it is free in the abdominal cavity. For accumulations in other cavities special names are used, as hydrothorax, hydropericardium, hydrocephalus, etc.

Edema of the subcutaneous cellular tissue is a very common form of dropsy; it is usually confined to certain regions, but may become general, in which case it is referred to as anasarca. The site in which edema most frequently occurs is in the feet and ankles, next to this is the region about the lower eyelids.

In a normal state of health there constantly exudes from the blood vessels, especially the capillaries, a fluid derived from the serum of the blood. This percolates between the cells of all tissues, and is the means of carrying nourishment to all those cells which are not in direct contact with blood vessels. These interstices between the cells are drained by the vessels of the lymphatic system, which are able to carry off easily all the fluid which comes to them under ordinary circumstances.

The composition of this lymph is very nearly the same as that of the serum of the blood. It contains a larger proportion of water and only about three per cent of proteids. As a rule it contains no fibrin, although it will coagulate upon the addi-

tion of fibrin ferment, showing the presence of some of the fibrin elements. Its specific gravity will average about 1.015.

Cohnheim taught that the most important factor requisite to the production of dropsy is malnutrition of the walls of the blood vessels. It is well to keep this in mind, for although in most cases the other causative agents are much more evident yet this element of malnutrition will almost certainly be found to exist in a greater or less degree. It can readily be imagined that the single layer of delicate cells which forms the wall of the capillary vessels would be very sensitive to changes in the blood which is constantly passing them. In diseases of the kidneys, the liver and other excretory organs a number of poisonous matters accumulate in the blood to an abnormal degree, and they cannot fail to harm this lining membrane. Fevers of all kinds, the presence of bacteria, pus or other products of microbic invasion will produce the same effect. Of course, in these diseases we do not often have dropsy, but the endothelial membrane is in a weakened condition, and a comparatively slight determining cause will bring on this symptom.

An excess of blood in the part may produce an edema. When it is caused by over-distention of the arteries the liability to edema is not so great as when there is a venous stasis. In the former case the capillaries are constantly receiving plenty of fresh blood, while in the latter the same blood remains in the vessels and the endothelium derives but little benefit from it. Valvular disease of the heart is one of the main causes of a general slowing of the blood current and especially of the venous stasis. The pressure from behind, the vis a tergo, of the blood in the veins is never great under the best of circumstances, and when the power of the heart is weakened from any cause this propelling force is reduced to a very low point. In valvular disease of the heart the amount of blood passed through this organ is diminished until a compensatory hypertrophy is established. In the meantime the blood in the veins being impeded to some extent in front and not forced from behind, flows very sluggishly.

In the legs the blood has to mount some distance against the

force of gravity, which greatly retards the circulation. While the patient walks about vigorously the contraction of the muscles of the legs, by pressing upon the vessels, helps to force the blood forward; but such patients can rarely walk with any great amount of vigor, the blood does not receive this extra help, and an edema of the feet and ankles is almost sure to be seen at some stage of the case. At first this is merely a puffiness observed at night after being up all day. The condition spreads from the feet up the legs, becoming greater as the case progresses. After a time the swelling is not entirely reduced even after a night's rest; the parts feel cold and pit upon pressure, the dents remaining for quite a length of time. Unless the case is treated properly this edema will finally involve a large portion of the body, it is an expression of extreme weakness of the circulation, and is rightly regarded by the laity as a very grave symptom.

Allied to this condition in certain ways is the accumulation of fluid in the abdomen. This escapes from the vessels of the mesentery and intestines; it is seen in conjunction with dropsy in other parts, and may come from the same state of cardiac weakness which causes edema of the feet. In many instances, however, it has a special cause in an obstruction to the flow of blood through the liver. As is well known, all of the blood from the stomach, small intestine and most of the colon is gathered up into the portal vein and goes through the liver. Whenever there is any obstruction in this organ the blood is dammed back into the other viscera and its fluid oozes out into the general peritoneal cavity.

A state of inflammation of the liver, bringing an abundance of leucocytes to the organ and causing a swelling of its cellular portion, produces a compression of the blood vessels thus impeding the circulation. In chronic inflammations the overgrowth of the connective tissue has the same effect but it is carried to a greater degree. In this disease the lumen of the blood vessels is sometimes almost obliterated, and it is in such cases that we find persistent dropsy in the abdomen.

In diseases of the kidneys a large proportion of the poisonous

matters which these organs should excrete are allowed to remain in the blood. These injure the walls of the capillaries, as referred to above, and the dropsy first seen in these cases is probably purely from this cause. Later on these same poisons affect the force of the heart muscle and weaken the nervous system, so that we may readily see how a part of the general anasarca sometimes observed in such cases may be due to circulatory weakness.

The general treatment of these cases depends, of course, largely upon the cause. Where the heart alone is at fault the patient should be put to bed, or at least confined to a chair if he cannot lie down with comfort, as frequently happens. Efforts must be made to increase the nutrition of the heart muscle and the efficiency of its nerve supply. To this end we must attend to his diet; patients have a poor digestion and are often afflicted with diarrhea. The most nourishing and easily digested foods must be given, in as great an amount and at as short intervals as he can digest them. Tonics for the heart and nerves must be administered with care and judgment must be observed in their use, for there is grave danger of stimulating the heart beyond its strength.

Digitalis and strychnine are powerful drugs, and their effects must be watched constantly. I have had better results with a preparation called anasarcin, which is a combination of several mild tonics, alteratives and diuretics. It is a much safer drug to leave with the patient, and is very reliable in its action; its diuretic effect is one of the best means of reducing the dropsy.

Cases of renal dropsy are frequently helped by the saline purgatives and by any measures which increase the amount of perspiration. The poisons which should be eliminated by the kidney can in a large measure escape through the bowel and the skin, and these means must be used to the point of endurance. As the circulation is always weak it is necessary to administer cardiac and general tonics, and for these patients the same drug, anasarcin, is probably more efficacious than any other.

For dropsy into the abdomen the diuretic action of anasarcin and its tonic effect make it the remedy on which I have depended.

This seems high praise, but the favorable opinion formed will be found in the histories of cases given below, which are only a few chosen at random from my practice during the past year:

Case 1.—Mrs. E., married; physical examination, aortic stenosis; no doubt of long standing. Goitre from pubescence. During first pregnancy developed acute nephritis with pronounced general anasarca. Usual remedies tried unsuccessfully. Anasarcin recommended; tablet to be used every three hours. After three or four days' treatment, marked diminution of the dropsical effusion, which being carried on during the remainder of gestation, enabled her to go through the parturient period successfully. There have been several returns of the dropsy since this attack three years ago, all of which have yielded promptly by the use of this remedy.

Case 2.—Mrs. F., widow, age 67 years. Mitral regurgitation. Chronic interstitial nephritis; general anasarca, with all accompanying and distressing symptoms. Diuretin, infusion digitalis and the general agents proved unsuccessful. Anasarcin, one tablet every three hours encouraged by the use of salines produced decided relief to such an extent that the patient is now going about in comparative comfort.

Case 3.—Edwin R., aged 18 years. History of scarlet fever when 7 years of age. Aortic regurgitation during attack of scarlet fever with general anasarca which only partially disappeared after months of confinement with the usual remedies. Was placed upon anasarcin six weeks ago; one tablet every three hours until active elimination was secured both by kidney and bowels; then a tablet three times a day. At this time, August 2, 1907, there is no evidence of any dropsy, and to all appearances he seems to be regaining his strength rapidly.

Case 3.—John R., 42 years of age. Has been a spreer. Hypertrophic cirrhosis of the liver. Mitral regurgitation; albumen, hyaline casts and granular casts found in the urine. The effusion was so great into the abdominal cavity that it was necessary to aspirate. Four gallons of fluid withdrawn, producing very decided relief, showing evidence a few days thereafter of the return of the edema. He was placed upon anasarcin as above de-

scribed, in connection with tonics, and has been comparatively comfortable ever since. My observation has been that this agent is serviceable in all dropsical conditions, irrespective of cause—with the exception probably of those which are entirely mechanical in character.—*Medical Progress.*

Editorial.

SMALLPOX.

We are not an alarmist, or a pessimist, nor ever have been, yet we desire to say that at this time there is entirely too much smallpox in this city and vicinity, as well as in other localities in this State. With a method of prevention established well nigh a century ago, so far so that discussion is almost needless, yet it is more than passing strange that we should be subjected to even occasional visitations of so loathsome, but preventable disease, with its inconveniences, its annoyances, and the accompanying loss of life, impairment of natural abilities, and the financial loss and disturbed business relations.

What is needed is not only vaccination, but re-vaccination from time to time, and this should not be optional, but compulsory. It is a well known and established fact that the German Empire has almost eliminated smallpox from its territory, and this by compulsory vaccination and re-vaccination. In Germany every child must be vaccinated in the year following that of its birth; and all scholars—which includes every inhabitant of the earlier years of life, in both private and public schools must be re-vaccinated in the twelfth year. When the vaccination and re-vaccination is not successful they must be repeated in the two following years. In 1888 Gerstacher considering the significance of re-vaccination showed that in Germany while the mortality from smallpox had not differed formerly from other countries, it had fallen to the minimum under their vaccination laws, so that the disease could be regarded as having disappeared, except in some frontier districts; while Austria, with her defective regulations along this point, suffers sorely from the disease.

We cannot say just how long a vaccination will protect an individual —the period of protection not yet having been definitely determined, nor may it ever be, owing to many conditions, circumstances and environments, varying so in different individuals, scarcely if ever, do we find everything pertaining to two individuals alike in each and every particular, so may we find the period of protection differing; yet that robs it not of its beneficence, and does not lessen the grandeur of Jenner's reputation. In our

own personal knowledge, a single vaccination in infancy or childhood has proven protective during the entire life of the individual, even though it has been prolonged to the alloted three score and more, and the individual has been exposed on numerous occasions to either direct or mediate contagion, and this fact has long been established beyond a possible doubt or question. The term of protection not being definite, protection complete and perfect can only be secured by re-vaccination from time to time. This re-vaccination should never be deferred beyond a decade, and it would be better if resorted to within seven years, and best if within five. If the subsequent vaccination is successful it was needed, and is well worth the temporary inconvenience; and if not successful, it is nothing more than a scratch of the cuticle. As a matter of course, we do not take into consideration some unpleasant and in some cases unfortunate results in past years, but with our present knowledge and perfection of all details pertaining to vaccination, such conditions should now come within the province of malpractice only. Furthermore, the inconvenience, suffering, or even loss of life of the few, being more than compensated by the protection and welfare of the many—this being a recognized principle of "grim visaged war," whether waged against a human foe, wild beast of forest or field, leviathans of the deep, or micro-organisms that have as yet not been demonstrated.

In this city, vaccination is required by municipal enactment of every one coming within the corporate limits within ten days after their arrival; yet this, as with many other municipal enactments, is far more "honored in the breach than in the observance." Our public school regulations very wisely require the vaccination of every child on entering, and occasional outbreaks of smallpox within the past thirty years has occasioned a pretty thorough vaccination and re-vaccination of our citizens, which has been to a certain degree beneficial.

However, municipal enactment will not suffice to keep us as free from this disease as we should be, unless a far greater degree of enforcement of municipal enactments be secured, which is somewhat doubtful of our being able to secure. We must go a little farther afield, and look to the State to come to our relief; and while the regulations as to vaccination in the different States may and will for some time vary, more or less, yet by proper and efficient measures on our part, our immunity will be so marked that adjacent States will either keep pace with us or soon fall into line; and additional immunity to them and our own people will accrue.

The rapid increase of population in this and other cities of this State, most largely due to immigration, our large proportion of negroes, they being shiftless, shifty and "vagrom," crowding and congesting our most unsanitary localities, the difficulty of early diagnosis of this disease in this class of our population, and our inefficiently enforced municipal regula-

tions, will be a continued menace, and will serve from time to time to occasion more or less frequent outbreaks of greater or less magnitude, occasioning greater expense and far more trouble and annoyance than will a systematic method of protection that can and will protect.

Although we have already said that argument along this line is needless, we cannot refrain from citing the following well established and authenticated facts

"In the German army from 1874 until 1896 there was not a single death from smallpox. Not one death in 22 years!"

"In the German Empire, with its 52,612,568 people, there was only *ten deaths* in 1896; and in 265 German cities aggregating a population of 14,125,677, there was only *two deaths* from smallpox in that year!"

Wernher, in his reent work, *"Zur Impffrage,"* while citing the mortality, the suffering and distress, the loss of sight and other results of this abominable malady prior to vaccination and re-vaccination, not optional, but compulsory, says: "We now find no child mortality from smallpox in vaccinated children;" and "among adults, wherever vaccination and re-vaccination are maintained, mortality from smallpox is at an end."

And now what shall be done? Shall we still go on carrying a rock in one end of the bag and a pumpkin in the other, or shall we do *something?* Is it not about time that we should cease the farcical measures of meeting a condition in an ineffectual manner? It is a question that is "up to" out State Board of Health, and our County and Municipal Boards of Health, who should not cease until they have passed it "up to" our law makers; in which we can confidently say, they will be sustained by the mass of the medical profession in the State.

With a proper and efficient enactment of regulations and a proper and efficient enforcement of the same, not leaving it to municipalities, but making it compulsory that evry resident of every civil district in the State shall be vaccinated and re-vaccinated every five, seven or ten years, and we will have no more annoyance along this line. We will not go into details; that can be left for future consideration. But we do most sincerely hope that by the time another legislature convenes and adjourns in this State, that we will have such legislation as can and will prove effective. Any one coming into the State who is not willing to submit to such regulations as will prevent so dire an evil, is not a desirable citizen, and should be made to leave.

In conclusion we will use an old adage, never so *apropos* as in this particular instance: *"Anything worth doing, is worth doing well."* We have tried half-way measures long enough, and are and always have been impressed with the democratic doctrine "of the greatest good to the greatest numbers," regardless of the cost, provided, "we have the price," and that we think is unquestionable. By vaccination and re-vaccination we can accomplish something, and this should be not optional, but compulsory.

Waiting until an outbreak of smallpox occurs is somewhat like "locking the stable door after the horse is stolen," and while good is accomplished thereby, it does not offer the benefits and advantages of regular systematic *vaccination and re-vaccination at stated periods, not too far apart.*

TWENTIETH ANNUAL MEETING OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Personal matters and unusual pressure on our space in our January number prevented our giving even a brief statement of the regular annual meeting of the best special medical and surgical association in the land. The meeting was held in New Orleans, Dec. 17-19, ult., under the presidency of Dr. Howard A. Kelly, of Baltimore, the secretary being our affable and courteous fellow-townsman, Dr. Wm. D. Haggard. Being a limited organization—200 members being the limit—the attendance in person of seventy-six at New Orleans, on the extreme southern border of the field of the Association, speaks well indeed for the interest manifested; in addition to the attendance of the active members of the Association were a large number of the medical men of the Crescent City each day, who are to be congratulated on the unusual opportunity of having with them some of the most earnest, live and progressive surgeons and gynecologists of the South. Thirty-seven papers were read in full, and the discussions thereon exceeded in fulness those of any previous meeting. The entertainments were most delightful and enjoyable and were not permitted to interfere with the business meetings of the Association. The Clinic at the Charity Hospital was a most interesting interlude in the scientific work, a large number of important cases and new methods of managing the same were presented by the clinical attaches and officials of this great institution. The next meeting will be held in St. Louis, Mo., Dec. 15-17, 1908, and the following officers were elected: President, Dr. F. W. Parham, New Orleans; Vice-President, Dr. W. F. Westmoreland, of Atlanta, and Dr. H. D. Fry, of Washington City; Secretary, Dr. W. D. Haggard, of Nashville; Treasurer, Dr. Stuart McGuire, of Richmond; with Dr. John Young Brown, Chairman of the Committee of Arrangements.

PUERPERAL ECLAMPSIA.—In a short, but very excellent and practical paper read at the last November meeting of the Tenth Congressional District Medical Association of Georgia, by Dr. Joseph Eve Allen, of Augusta, and published in the *Journal-Record of Medicine,* December, 1907, we find the following:

"The indications to be met in the treatment of puerperal eclampsia are four in number, viz:

"1st.—The arrest of the convulsion.

2nd.—The removal of all sources of reflex irritation and the sedation of increased nervous irritability.

"3rd.—The elimination of toxins from the blood.

"4th.—The sustaining of the patient during convalescence."

The following paragraph in regard to a very important therapeutic agent, which fully conforms to our personal observation during many years, we quote in full:

"The great value of veratrum viride in eclampsia is not appreciated by a very large part of our profession and its use is condemned by some very eminent obstetricians, yet it is a drug that possesses almost specific virtues in this affection, and the reason that it is not more generally employed is because the preparations used do not represent its full activity. The only preparation of veratrum viride that can be depended upon is that known as Norwood's tincture. It is given hypodermatically in from five to eight drop doses, followed by three to five drops hypodermatically every half hour until the pulse falls to 60 per minute. It is said that as long as the pulse remains at 60 per minute, no convulsions will occur. This is denied by Wright and some other of the recent writers, but I have never seen a woman have a convulsion after this action of the drug had been induced. Veratrum viride slows the pulse and lowers intravascular pressure by dilating the canillaries and thus, as it were, bleeds the woman into her own blood vessels. It is also a nerve sedative and by relieving arterial tension, it acts indirectly as a diaphoretic and diuretic. Venesection and veratrum viride must not be employed in the same case. Veratrum is best for hydremic cases and in eclampsia after delivery. Its use should always be carefully watched and strychnia and whiskey given if symptoms of heart failure threaten."

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can be used in such quantities as to insure more positive results than could be expected from an agent which must be used with precaution. A trial package will be mailed free of charge to physicians if they will send their name and address to J. S. Tyree, Chemist, Washington, D. C.

No Pent-up Utica.—Among a number of endorsements, some personal and others by letter, received since the issue of our January number, we give the following from an old and esteemed friend, a graduate of the Medical Department, University of Nashville, and a member in good standing in his State and County Societies, Dr. T. E. Prewitt, of Grand Junction, this State, who writes: "My Dear Doctor—Your comment on the circular of the Kentucky State Medical Association meets my hearty approval. When I graduated in 1861, I asked that grand and noble medical philosopher, Dr. W. K. Bowling, to define the term doctor, which he did in an emphatic and lucid manner, stating that in graduating at the Medical Department of the University of Nashville, we were authorized to use any agent whatever that we saw proper, whether emanating from above or below, or from the uttermost parts of the earth. I have found ecthol, aristol, Peacock's Bromides, anasarcin, glyco-heroin, etc., etc., all O. K."

The Coughs Following Grip.—Dr. John McCarty (Louisville Medical College), in giving his personal experience with this condition, writes as follows: "Ten years ago I had the grip severely and every winter until 1902, my cough was almost intolerable. During January 1902, I procured a supply of Antikamnia & Codeine Tablets and began taking them for my cough, which had distressed me all winter, and as they gave me prompt relief, I continued taking them with good results. Last fall I again ordered a supply of Antikamnia & Codeine Tablets and I have taken them regularly all winter and have coughed but very little. I take one tablet every three or four hours and one on retiring. They not only stop the cough, but make expectoration easy and satisfactory. The best results are obtained by allowing the tablet to dissolve slowly in the mouth before swallowing."

Cancer Information Wanted.—Dr. Horace Packard, 470 Commonwealth Avenue, Boston, Mass., desires information regarding any alleged recoveries or cures of inoperable or recurrent carcinoma of the mammary gland. If any case or cases are known to anyone who reads this circular and can be authenticated by facts as to the history and condition prior to recovery and the length of time which has elapsed since recovery such information will be much appreciated and duly acknowledged. Any well-authenticated reports of recoveries from carcinoma located in other parts than the mammary gland will be welcomed. Cancer paste cures, X-Ray

cures, radium cures, or cures as result of surgical operations are not wanted. Hearsay cases are not wanted unless accompanied by name and address of the person who can give knowledge first hand.

TRAINING IN MEDICAL ORGANIZATION.—The students of the University of Pennsylvania Medical School have formed an organization, the purpose of which is to acquaint the undergraduates with the workings of the American Medical Association, after which it is very closely modeled. The various student societies take the place of the State organizations and elect members to a House of Delegates which transacts all the business of the association. An annual meeting is held at which papers are read by chosen members, thus encouraging original research and a scientific spirit. The organization is named the Undergraduate Medical Association of the University of Pennsylvania, and already has over two hundred and fifty members.

Middle Granville, N. Y., Oct. 31, 1906.

The Anasarcin Chemical Co., Winchester, Tenn.

It is with pleasure that I am enabled to state that my case of goitre with valvular disease of heart was permanently benefited by the samples you so kindly sent. Very truly,

DR. J. A. MORRIS.

WE COMMEND to the notice of our readers the advertisement of Robinson-Pettet Co., on advertising page 17 of this number. Robinson's Hypophosphites is an elegant and uniformly active preparation, the presence of quinine, Strychnine, iron, etc., adding mightily to the tonic value.

Reviews and Book Notices.

THE SEXUAL INSTINCT: ITS USE AND DANGERS AS AFFECTING HEREDITY AND MORALS. By James Foster Scott, A.B. (Yale), M.D., C.M. (Edinburgh). Late Obstetrician to Columbia Hospital for Women, and Lying-in Asylum, Washington, D. C.; Late Vice-President of the Medical Association of the District of Columbia, etc. Second Edition, Revised and Enlarged. 8 vo. 474 pages, III., Cloth, postpaid $2. E. B. Treat & Co., Publishers, 241-243 West 23d Street, New York, 1908.

This book contains much plain talking. Its justification will be found in the body of the work, designed to furnish the non-professional man with a sufficiently thorough knowledge of matters pertaining to the sexual sphere—knowledge which he can-

not afford to be without. Science strips all draperies from the objects it examines, and, in the search after truth, sees no indecorum in any earnest line of study, and recognizes no impropriety in looking at objects under an intense light and in good focus. The future prospects of humanity rest in the sexual domain of those who are now living, and none will dispute that the degredation of mankind is due more to sexual irregularity than to any other cause. The author's knowledge of these subjects has been acquired through legitimate channels; as a medical student at Edinburgh, Vienna and London; then a residence of over two years in a hospital devoted exclusively to obstetrics and the diseases of women, followed by several years more of hospital and private practice. There are probably few subjects more deserving of frank scientific discussion than the facts and obligations of sexual life. These topics are boldly but clearly discussed by the author for the benefit of lay readers, particularly of adult men, among whom, it is to be hoped, the book will have a circulation proportionate to its merit and importance.

A TEXT-BOOK OF PRACTICAL GYNECOLOGY. For Practitioners and Students. By D. Tod Gilliam, M.D., Emeritus Professor of Gynecology in Starling-Ohio Medical College, and Sometime Professor of Gynecology, Starling Medical College; Gynecologist to St. Anthony and St. Francis Hospitals; Consulting Gynecologist to Park View Sanitarium, Columbus, Ohio; Fellow of the American Association of Obstetricians and Gynecologists; Member of the American Medical Association, of the Ninth International Medical Congress, etc. *Second Revised Edition.* Illustrated with 350 engravings, a colored frontispiece, and 13 full-page half-tone plates. 642 Royal Octavo Pages. Extra Cloth, $4.50 net; Half-morocco, Gilt-top, $6.00 net. *Sold only by subscription.* F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

The plain and practical character of this work will commend it to both student and practitioner. It is divided into fifty chapters, corresponding to the usual number of lectures and recitations in an ordinary course or session. Unsettled theories have been given little space, and effete matter has been excluded. Scientific methods in classification and arrangement have given place to a plain, connected narration of facts and views when in the opinion of the author they would render the text more readily un-

derstood. In the choice of technique, sufficient variety is submitted to meet the varied requirements. In this second and revised addition some commendable changes are noted. These are for the most part limited to technique, and among them are the operation of Goffe for extensive Cystocele, and that of Watkins for post-climacteric prolapse of the uterus. A number of half-tone plates have been added, besides the substitution of some cuts for others less desirable. Also a regional index of symptoms has been appended, which will materially aid the practitioner and student in making quick and ready reference.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine, and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Eighth Revised Edition. Octavo of 1317 pages, fully illustrated. Cloth, $5.50 net; Half Morocco, $7 net. Philadelphia and London. W. B. Saunders Company. 1907.

Eight large editions, and over 30,000 copies already sold, of this excellent work is sufficient evidence of its value. The rapid exhaustion of each edition has made it possible to keep the book absolutely abreast of the times. In this edition the diseases due to animal parasites have been re-arranged and classified, the articles on Ankylostomiasis, Dracontiasis, Trypanosomiasis, and Beri-Beri re-written, and new articles on Parasitic Infusoria and Febrile Tropical Splenomegaly added. There have also been added articles on Aplastic Anemia, X-rays in Leukemia, Polycythemia with Splenic Tumors, Stokes-Adams' Disease, Sahli's Desmond Test, Intestinal Auto-intoxication, and Senile Dementia. The entire work has been carefully revised. The following statements of previous editions are authoritative: Charles Lyman Greene, M.D., Professor of the Theory and Practice of Medicine, University of Minnesota: "Your book seems to me one that in every way meets the requirements of both student and practitioner, being complete, practical, up-to-date, and readable." Wm. E. Quine, M.D., Professor of Medicine and of Clinical Medicine, College of Physicians and Surgeons, Chicago: "I consider Dr. Anders' Practice one of the best single-volume works

now before the profession, and one of the best text-books for medical students." The Lancet, London: "Is very complete, and it deserves a prominent place amongst medical text-books."

A TREATISE ON DISEASES OF THE SKIN. For the use of advanced Students and Practitioners. By Henry W. Stelwagon, M.D., Ph. D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Fifth Edition, Revised. Handsome octavo of 1150 pages, with 267 text-illustrations, and 34 full-page, colored and half-tone plates. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $6.00 net; Half Morocco, $7.50 net.

The demand for five large editions of this work in a period of five years is, indeed, most gratifying. Such a kind reception permits the inference that the predominant aim kept in view in its preparation, of giving the general physician a treatise written on plain and practical lines, with abundant helpful case-illustrations, has been successful. For this edition the entire work has undergone a very thorough revision and a number of new illustrations have been added. The articles on Frambesia, Oriental Sore, and other tropical diseases have been entirely re-written. The new subjects include Verruga Peruana, Leukemia Cutis, Meralgia Paræsthetica, Dhobie Itch, and Uncinarial Dermatitis. Clear description and careful compilation are marked features of the book, and for conservative judgment and accurate observation it will hold the first place with books on Dermatology, being especially valuable to the advanced student and general practitioner. It is thoroughly up-to-date in every respect.

A TEXT-BOOK OF PHYSIOLOGY. By Isaac Ott, A.M., M.D., Professor of Physiology in the Medico-Chirurgical College of Philadelphia. *Second Revised Edition.* Illustrated with 393 half-tone engravings, many in colors. Royal Octavo, 815 pages. Bound in Extra Cloth. Price, $3.50 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

It is only a short time since we had the pleasure of calling attention to the first edition of Prof. Ott's excellent text-book, which we at the time heartily commended, as we can this edition. This second edition has been materially enlarged by the addition of two hundred and forty pages; considerable new mat-

ter has been added, as this important fundamental department of medicine is undergoing continuous development. The subject of electro-physiology has been considered more comprehensively; the article on the sympathetic system has been nearly entirely re-written, and the latest acquisitions pertaining thereto have been incorporated, the chapter on Vision has been completely recast; and, in fact, nearly every page has been subject to alterations and eliminations. The work on Peristalsis of the Intestines at the laboratory of the Medico-Chirurgical College has been incorporated; and over two hundred and fifty additional figures, many of them original, have been included in this edition.

IMMUNE SERA: Antitoxins, Agglutinins, Hemolysins, Bacteriolysins, Precipitins, Cytotoxins and Opsonins. By Charles F. Bolduan, M.D., Bacteriologist, Research Laboratory, Department of Health, City of New York. Second Edition, Revised and Rewritten. 12mo. Cloth, pp. 162. Price $1.50. John Wiley & Sons, Publishers, New York, N. Y., 1907.

While this little work contains much of the monograph by Professor Wasserman, translated and published by Dr. Bolduan in 1904, he has made a number of valuable additions. The work is a very concise, comprehensive and practical consideration of the subjects of Antitoxins, Agglutinins, Bacteriolysins, Hemolysins, Precipitins, Cytotoxins, Opsonins, Snake Venoms and their antisera, and Serum Sickness. No one undertaking the study of Serum therapeutics can well afford to be without it.

SURGICAL APPLIED ANATOMY. By Sir Frederick Treves, F. R. C. S., Sergeant-Surgeon to H. M. the King; Late Lecturer on Anatomy at the London Hospital. New (5th) edition, thoroughly revised. Pocket size, 12mo, 640 pages, 107 illustrations, of which 41 are in colors. Cloth, red edges $2.25 net. Lea Brothers & Co., Philadelphia and New York, 1907.

This is one of the rare works which is all meat. That it is widely appreciated is shown by the fact that 37,000 copies have been printed. The reason is seen on every page. It deals with a "borderland" subject, where two great branches meet and overlap. To write authoritatively accordingly requires full command of both, and Treves possesses this knowledge in a meas-

ure that has made him one of the most famous surgeons and anatomists in the world. The author has again brought it up to the latest date, thoroughly revising it and adding considerably to its text and illustrations. The use of colors is a new feature of obvious value in connection with its subject.

Selections.

In cut-throat wounds where the thyrohyoid membrane has been severed, it is necessary, in order to restore perfect phonation and deglutition, to suture this membrane accurately.—*American Journal of Surgery.*

Impaction of Feces.—Lewis H. Adler defined impaction as an accumulation of feces in the ampulla of the rectum or the sigmoid flexure.

It is usually accompanied by diarrhea, which may be obstinate. It results from intestinal atony in old people, or from paralytic affection. The movements have a peculiarly offensive odor. Extensive ulceration may supervene. Hypochondriacal symptoms are frequent. Examination shows dullness over the iliac fossa. Treatment consists of removal of the mass by softening it in some way by enemata and then assisting by the use of a spoon in dislodging the mass. Inspissated ox-gall and glycerine are useful in the enema. Caution should be used in prescribing drastic cathartics, as rupture of the intestine may result. Inflammation may be relieved afterward by the use of enemata of flaxseed tea, medicated with icthyol or benzoin. Remedies must then be used to stimulate the bowel to normal action.—*Medical Record.*

The Surgical Treatment of Tri-Facial Neuralgia.—F. Martin (*Annals of Surgery,* May, 1907) reports eight cases of tri-facial neuralgia treated by resection of the Gasserian ganglion. Six cases were entirely cured without any operative complication; one died from pneumonia on the fifth day after operation; and one died the morning after operation from shock due to hemorrhage excited in the course of the operation. It has been the author's experience that recurrence follows all peripheral operations. In some of his cases of removal of the Gas-

serian ganglion the operation has been so recent that he is unable to predict whether or not cure will be permanent. It seems pretty well settled that permanent cure results from removal of the entire ganglion. The great drawback to the advancement of the operation is the high mortality attending it. The key-note to the success of the operation is the avoidance of hemorrhage; this is at times exceedingly difficult. The operation is one which requires all the dexterity a skillful operator can possess, nor is he justified in demonstrating it to a class, for in doing so he increases the risk of hemorrhage and endangers the patient. The division of the sensory root back of the ganglion is the most important step in the operation.

A LARGE BABY.—Large babies are not common every-day occurrences. La Chapette in over 7,000 cases found none over 10 pounds. In 7,515 deliveries in Boston Lying-In Hospital the heaviest baby weighed only 12 pounds. The writer has delivered a number of 12-pound babies, and one which weighed over 15 pounds.

Dr. Mattner of this city delivered Mrs. D. at the Irving Sanitorium, on November 8, of a boy that weighed 17 pounds and two ounces. This was a large baby, only exceeded by Mrs. Bates, the so-called Nova Scotia giantess, who had two children, the first weighing 19 pounds and the second 28 3-4 pounds.

The causes usually ascribed for such large babies are, large size of the parents, successive pregnancies, advanced age, and prolongation of the period of gestation. None of these causes could be attributed in this case. The mother's age is 28 and weighs 125 pounds. The father's age is 35 and weighs 165 pounds. She had one child previously which weighed 11 pounds. Gestation was not prolonged, as she was delivered on the expected 280th day.

When we consider that the average weight is from 7 to 8 pounds, this one weighing over 17 pounds, the average length 20 to 21 inches, this one 27 inches, we see how above the ordinary is this case. If we still further compare other measurements it will give us an idea of the difference between it and the ordinary. The occipito mental diameter was 9 inches, ordinary 5 inches; occipito frontal 8 inches, ordinary 4 1-2 inches; biparietal 5 1-2 inches, ordinary 3 1-2 to 3 3-4 inches; bi-acromial 8 1-2, ordinary 4 3-4 inches.

The child was still-born, having been dead several days. The delivery caused but a slight tear, requiring only two sutures. The patient made a good recovery, for which the doctor deserves great credit.—D. Maclean, M.D., in *California Medical Journal.*

LISTERINE

The original antiseptic compound

(Awarded Gold Medal (Highest Award) Lewis & Clark Centennial Exposition, Portland, 1905. Awarded Gold Medal (Highest Award) Louisiana Purchase Exposition, St. Louis, 1904; Awarded Bronze Medal (Highest Award) Exposition Universelle de 1900, Paris)

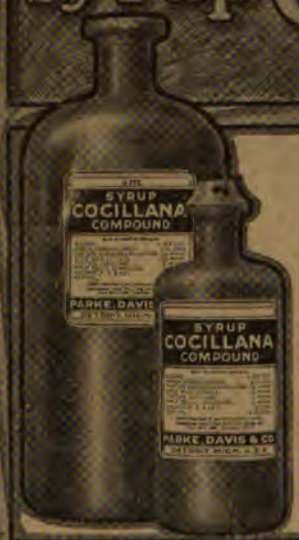
Listerine represents the maximum of antiseptic strength in the relation that it is the least harmful to the human organism in the quantity required to produce the desired result; as such, it is generally accepted as the standard antiseptic preparation for general use, especially for those purposes where a poisonous or corrosive disinfectant can not be used with safety. It has won the confidence of medical men by reason of the standard of excellence (both as regards antiseptic strength and pharmaceutical elegance), which has been so strictly observed in its manufacture during the many years it has been at their command.

The success of Listerine is based upon merit
The best advertisement of Listerine is—Listerine

Lambert Pharmacal Company

St. Louis, U. S. A.

Syrup Cocillana
COMPOUND



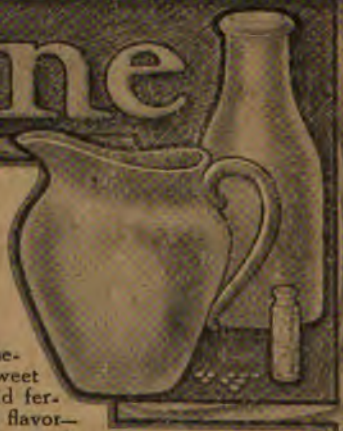
EACH FLUIDOUNCE CONTAINS:

Tinct. Euphorbia Pilulifera, 120 minims.	Syrup Squill Compound, 24 minims.
Syrup Wild Lettuce, 120 minims.	Cascarin (P. D. & Co.), 8 grains.
Tincture Cocillana, 40 minims.	Heroin hydrochloride, 8-24 grain.
Dose, ½ to 1 fluidrachm.	Menthol, 8-100 grain.

SYRUP COCILLANA COMPOUND offers to the practitioner of medicine a safe and efficient agent for the treatment of the various catarrhal affections of the respiratory tract for which he is commonly called upon to prescribe. This **NEW LAXATIVE EXPECTORANT**, the name of which, by the way, does not suggest its therapeutic application to the patient, is of especial value in the treatment of both acute and chronic bronchitis, particularly when the secretions are scanty and hard to expel. *Give it a trial—it will please you.*

Supplied in pint and ½-pint bottles.

Lactone



TO MAKE DELICIOUS BUTTERMILK.

Put a quart of pure, fresh, cold milk in a pitcher. Add one-third of a quart of hot water. Put in a pinch of salt. Crumble in a **LACTONE TABLET**, stirring well into the milk. Cover and set in a warm place for 24 to 48 hours. Put the fermented milk into an ice box or other cool place. When cold it is ready for use. Stir well before serving.

LACTONE TABLETS contain pure cultures of selected lactic-acid germs. When added to sweet milk, as directed above, they cause lactic-acid fermentation, the result being a buttermilk of finest flavor—more nutritious than dairymen's buttermilk because containing all of the butter-fat of the milk.

LACTONE BUTTERMILK, either as a beverage or as a food for invalids, convalescents and infants, may be prescribed with perfect confidence.

Lactone Tablets—bottles of 25.

PARKE, DAVIS & COMPANY

LABORATORIES: DETROIT, MICH., U. S. A.; WALKERVILLE, ONT.; HOUNSLOW, ENG.

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